

**OFFICIAL FILE**

ILL. C. C. DOCKET NO. 00-0027  
Focal Docket No. 1.0

Witness \_\_\_\_\_

**STATE OF ILLINOIS**

Date 3-15-00 Reporter lgv

**ILLINOIS COMMERCE COMMISSION**

**FOCAL COMMUNICATIONS** )  
**CORPORATION OF ILLINOIS** )  
 )  
**Petition for Arbitration Pursuant to** )  
**Section 252(b) of the Telecommunications** )  
**Act of 1996 to Establish an** )  
**Interconnection Agreement with Illinois** )  
**Bell Telephone Company d/b/a** )  
**Ameritech Illinois** )

**Docket No. 00-0027**

**VERIFIED STATEMENT OF JOHN BARNICLE**

**On behalf of**

**FOCAL COMMUNICATIONS CORPORATION**  
**OF ILLINOIS**

**DATED: January 31, 2000**

**Introduction**

1  
2  
3 1. Q. PLEASE STATE YOUR NAME, TITLE, BUSINESS ADDRESS AND  
4 RELEVANT PROFESSIONAL EXPERIENCE FOR THE RECORD.

5 A: My name is John Barnicle, and I am Executive Vice President and Chief  
6 Operating Officer of Focal Communications Corporation ("Focal"). My business  
7 address is 200 N. LaSalle Street, Chicago, Illinois 60601. I earned an MBA from  
8 DePaul University, and a BS Degree in Electrical Engineering from the  
9 University of Illinois - Champaign. I have spent a number of years in the  
10 telecommunications industry in various positions at Central Telephone Company  
11 ("Centel") and later at MFS Communications. A history of my professional  
12 experience is attached to my verified statement as Focal Exhibit 1.1.  
13

14 2. Q. PLEASE SUMMARIZE YOUR VERIFIED STATEMENT.

15 A: I will address Issues 1~~3~~ and 14 in Focal's Petition for Arbitration. I will  
16 demonstrate that Focal is entitled to intercarrier compensation for the transport  
17 and termination of all traffic which Ameritech delivers to Focal for termination on  
18 Focal's network. One rate should apply any time Ameritech delivers traffic to  
19 Focal's point of interconnection. In accordance with the analysis used by the  
20 Federal Communications Commission ("FCC") and the Illinois Commerce  
21 Commission ("Commission"), I will demonstrate that Focal's switches each  
22 provide the same (indeed, greater) geographic coverage as Ameritech's tandem

1 switches, and perform tandem functions. Accordingly, the inter-carrier  
2 compensation rate should be Ameritech's "tandem" interconnection rate.

3  
4 I will also provide support for Focal's request that a liquidated damages provision  
5 be incorporated into the interconnection agreement applicable to the provision of  
6 customer access circuits. Focal has been harmed by Ameritech's failure to  
7 provide accurate, reliable "firm" due dates in its Firm Order Confirmations  
8 ("FOC"), and by its failure to meet even the revised due dates it provides. A  
9 liquidated damages provision would establish a more equitable and balanced  
10 commercial relationship between Ameritech and Focal.

11  
12 Finally, I will show why the Commission should ensure that the interconnection  
13 agreement does not contain numerous loopholes by which Ameritech may be able  
14 to evade its responsibility to provision interconnection facilities and UNEs in a  
15 timely and reliable manner.

16  
17 3. Q. BEFORE ADDRESSING THE SPECIFIC ISSUES RAISED IN FOCAL'S  
18 PETITION FOR ARBITRATION, PLEASE PROVIDE A BRIEF  
19 DESCRIPTION OF FOCAL COMMUNICATIONS CORPORATION AND  
20 THE NEGOTIATION PROCESS.

21 A: Focal Communications Corporation is a rapidly growing telecommunications  
22 carrier that is headquartered in Chicago. It was granted a certificate of authority  
23 by the Commission in Docket 96-0373 on November 7, 1996 to provide switched

1 and dedicated, resold and facilities-based interexchange telecommunications  
2 services throughout Illinois and local exchange services in those portions of  
3 MSA-1 served by Ameritech and Centel. By Commission Order in Docket 98-  
4 0280, August 26, 1998, Focal was granted expanded authority to provide  
5 facilities-based exchange and resold local telecommunications services  
6 throughout the State of Illinois. Focal currently provides service in ten states and  
7 employs over six hundred employees nationwide.

8  
9 Focal and Ameritech held many meetings to negotiate the interconnection  
10 agreement that is the subject of this arbitration. The parties reached agreement on  
11 a number of issues, and Focal's request for arbitration only raised the most  
12 important unresolved issues that are critical to Focal's business. Also, the parties  
13 have continued to negotiate since the filing of the Petition and have resolved  
14 Issues 9, 10 and 11.

15  
16 **Interconnection Agreement Issues**

17  
18 **ISSUE 1: Focal and Ameritech were unable to agree upon**  
19 **the rate to be paid for reciprocal compensation.**  
20 **[Section 4.7 of the Interconnection Agreement].**  
21

22 4. Q. SHOULD AMERITECH BE REQUIRED TO PAY FOCAL FOR TRAFFIC  
23 THAT IS CARRIED ON THE FOCAL NETWORK?

1           A:    Yes, Ameritech should be required to pay Focal for traffic that is carried on  
2               Focal's network just as Focal is obligated to pay Ameritech for traffic that is  
3               carried on Ameritech's network. Focal should be allowed to charge Ameritech a  
4               single "transport and termination" or "inter-carrier compensation" rate that would  
5               apply anytime Ameritech delivers traffic to Focal's points of interconnection  
6               ("POI") for termination to a Focal customer. More specifically, Focal should be  
7               allowed to charge for tandem switching, transport, transport termination and end  
8               office switching. The rate should be Ameritech's "tandem" interconnection rate.

10    5.    Q.    WHAT RATE SHOULD AMERITECH BE REQUIRED TO PAY?

11           A:    Focal should be authorized to charge Ameritech a composite, postalized,  
12               intercarrier compensation rate of \$0.005175 per minute of use. That rate was  
13               developed through use of Ameritech's current tariff rates for end-office local  
14               termination, tandem switching, tandem transport termination, and tandem  
15               transport facility mileage. The tandem transport facility mileage is a rate per  
16               minute/per mile. In developing the rate, I have assumed an average of 12 miles of  
17               transport, which has, historically, been a common technique for ratemaking  
18               purposes.

19  
20               This results in the following rate:

21               End-Office Local Termination:                   \$0.003746 per MOU

22               Tandem Switching:                                 \$0.001072 per MOU

23               Tandem Transport Termination:                   \$0.000201 per MOU

1 Tandem Transport Facility Mileage:

2 \$0.000013 per MOU/per mile X 12 miles                      \$0.000156 per MOU

3 TOTAL = \$0.005175 per MOU

4  
5 6. Q. WHAT RATE DO THE PARTIES CHARGE EACH OTHER FOR TRAFFIC  
6 CARRIED ON THEIR NETWORKS UNDER THE CURRENT  
7 INTERCONNECTION AGREEMENT?

8 A: The current interconnection agreement requires the parties to pay \$0.009 per  
9 minute for traffic carried on the other carrier's network. Therefore, the \$0.005175  
10 per minute rate which Focal seeks in this proceeding represents a 42.5% reduction  
11 from the current rate.

12  
13 7. Q. WHY IS FOCAL PROPOSING A 42.5% REDUCTION IN THE  
14 INTERCARRIER COMPENSATION RATE IT MAY CHARGE?

15 A: The reduction reflects Ameritech's re-pricing of its end-office local termination,  
16 tandem switching, tandem termination and tandem transport termination rates to  
17 reflect the FCC's TELRIC pricing requirements.

18  
19 8. Q. IS FOCAL SEEKING AUTHORIZATION TO CHARGE \$0.005175 PER MOU  
20 FOR ISP TRAFFIC?

21 A: Yes. As is explained in the verified statement of Michael Starkey, there are no  
22 valid public policy, economic or technical reasons for treating ISP traffic any

1 differently than as if that traffic were local for the purpose of establishing an  
2 intercarrier compensation rate.

3  
4 9. Q. WHY IS FOCAL'S PROPOSED INTERCARRIER COMPENSATION RATE  
5 BASED ON AMERITECH'S RATE?

6 A: Although I am not an attorney and am not providing a legal opinion, in order to  
7 carry out my responsibilities, I have a basic understanding of the pricing for  
8 services and UNEs required by the Telecommunications Act of 1996 (the "1996  
9 Act"). It is my understanding that the 1996 Act provides for recovery by each  
10 carrier of costs associated with the transport and termination on each carrier's  
11 network facilities of calls that originate on the network facilities of the other  
12 carrier and the determination of such costs on the basis of a reasonable  
13 approximation of the additional costs of terminating such calls.

14  
15 In its Local Competition Order, at Paragraph 1085, (First Report and Order, CC  
16 Docket No. 96-98, Released August 8, 1996) the FCC established presumptive  
17 symmetrical rates based on the incumbent local exchange carrier's ("ILEC's")  
18 costs for transport and termination of traffic when arbitrating disputes under  
19 section 252(d)(2). The FCC concluded that using the ILEC's forward-looking  
20 costs and rates for transport and termination of traffic as a proxy for the costs  
21 incurred by interconnecting carriers satisfied the requirement of section 252(d)(2)  
22 of the 1996 Act that these costs be determined "on the basis of a reasonable  
23 approximation of the additional costs of terminating such calls."

1  
2 10. Q. HAS THE FCC PROVIDED ANY ADDITIONAL GUIDANCE REGARDING  
3 THE ESTABLISHMENT OF TRANSPORT AND TERMINATION RATES?

4 A: Yes, it has. In paragraph 1090 of the Local Competition Order, the FCC stated:

5 We find that the "additional costs" incurred by a local exchange  
6 carrier ("LEC") when transporting and terminating a call that  
7 originated on a competing carrier's network are likely to vary  
8 depending upon whether tandem switching is involved. We,  
9 therefore, conclude that states may establish transport and  
10 termination rates in the arbitration process that vary according to  
11 whether the traffic is routed through a tandem switch or directly to  
12 an end-office switch. In such event, states shall also consider  
13 whether new technologies (e.g., fiber ring or wireless networks)  
14 perform functions similar to those performed by an ILEC's tandem  
15 switch and thus, whether some or all calls terminating on the new  
16 entrant's network should be priced the same as the sum of  
17 transport and termination via the ILEC's tandem switch. Where the  
18 interconnecting carrier's switch serves a geographic area  
19 comparable to that served by the ILEC's tandem switch, the  
20 appropriate proxy for the interconnecting carrier's additional costs  
21 is the LEC tandem interconnection rate. [emphasis added]  
22 (Paragraph 1090, First Report and Order, CC Docket No. 96-  
23 98, Released August 8, 1996)  
24  
25

26 11. Q. WERE THESE CONCLUSIONS REFLECTED IN THE REGULATIONS  
27 ADOPTED BY THE FCC TO IMPLEMENT THE LOCAL COMPETITION  
28 ORDER?

29 A: Yes, the passage which is underlined above was codified by the FCC in 47 CFR  
30 Section 51.711(a)(3), which provides that, "Where the switch of a carrier other  
31 than an ILEC serves a geographic area comparable to the area served by the  
32 ILEC's tandem switch, the appropriate rate for the carrier other than an ILEC is  
33 the ILEC's tandem interconnection rate." I refer to this as the "geographic

1 comparability test", and I will address that issue at length later in my verified  
2 statement.

3  
4 12. Q. IS THIS THE FIRST TIME THE COMMISSION HAS BEEN ASKED TO  
5 ESTABLISH A RATE FOR TRANSPORT AND TERMINATION?

6 A: No, the first time this issue was presented to the Commission was in Docket 96-  
7 AB-1, the Teleport Communications Group ("TCG") arbitration with Ameritech.

8  
9 13. Q. WHAT DID THE COMMISSION CONCLUDE IN DOCKET 96-AB-1?

10 A. The Commission authorized TCG to charge the tandem rate for reciprocal  
11 compensation. The Order speaks for itself; however, the following passage  
12 provides guidance regarding what information the Commission considered in  
13 deciding the issue:

14 The record establishes that TCG serves a geographic area  
15 comparable to the area served by Ameritech's tandem switch  
16 through a combination of its own network and unbundled elements  
17 purchased from Ameritech. If a customer anywhere in the Chicago  
18 area wants TCG to provide service, TCG has a network capable of  
19 doing so and a switch capable of routing that traffic anywhere in  
20 the region. In the process, the TCG switch is capable of and will  
21 perform both end-office and tandem switching functions. As Staff  
22 noted, while it is not really possible to establish a precise  
23 correspondence between the area served by TCG's switch and  
24 Ameritech's Wabash switch, there is no question that because of  
25 the technologies employed, TCG's switch serves an area far  
26 beyond the downtown Chicago area served by the Ameritech  
27 tandem and performs tandem functions. Therefore, TCG is entitled  
28 to the tandem switched termination rate. Teleport Communications  
29 Group: Petition for Arbitration, 1996 ILL. PUC LEXIS 616, \*16-  
30 17, Docket 96-AB-001 (Nov. 4, 1996).  
31

1 14. Q. WHAT RELEVANCE DOES THE COMMISSION'S CONCLUSION IN THE  
2 TCG ARBITRATION HAVE TO THIS PROCEEDING?

3 A. The quoted passage from the TCG arbitration order identifies the criteria the  
4 Commission has used in the past and is likely to use to resolve Issue 1 in this  
5 arbitration. The Commission applied the geographic comparability test and also  
6 considered the functionality of TCG's switches in the TCG case. Therefore, I will  
7 provide information on Focal's network and particularly, the geographic coverage  
8 and functions of its switches to show why the tandem rate proposed by Focal for  
9 intercarrier compensation should be adopted.  
10

11 15. Q. DOES FOCAL SATISFY THE CRITERIA THE COMMISSION IDENTIFIED  
12 IN THE TCG ARBITRATION FOR APPLICATION OF THE TANDEM RATE  
13 FOR RECIPROCAL COMPENSATION?

14 A. Yes, Focal easily meets these criteria. Focal serves a geographic area comparable  
15 to the area served by Ameritech's tandem switch through a combination of its  
16 own network (owned or leased) and unbundled elements purchased from  
17 Ameritech. Indeed, Focal provides service throughout MSA 1. Focal Exhibit 1.2  
18 is a "Focal Coverage Map". Focal's network is not only capable of, but actually  
19 provides service to customers throughout MSA 1. Focal's switches can route  
20 traffic anywhere in the region and in the process will perform both end-office and  
21 tandem switching functions. Each of Focal's switches serves an area far larger  
22 than that served by any single Ameritech tandem switch.  
23

1 Since Focal satisfies the criteria established by the Commission in the TCG  
2 arbitration, Focal should be authorized to charge the tandem rate of \$0.005175.

3  
4 16. Q. IS FOCAL'S NETWORK ARCHITECTURE SIMILAR TO AMERITECH'S?

5  
6 A. No it is not, and it is important that the Commission understand the fundamental  
7 differences between Focal's and Ameritech's network architectures in order to  
8 properly resolve this, and indeed several other, issues in this arbitration. The most  
9 obvious difference between the networks is that Focal employs an architecture  
10 which currently uses only two switches to serve the entire area encompassed by  
11 MSA 1. Focal has one switch located in downtown Chicago and another located  
12 in Arlington Heights. On the other hand, Ameritech utilizes a traditional,  
13 hierarchical, hub and spoke network in which customers are connected to one of  
14 over one hundred wire centers with an end office switch at each location. Each  
15 end office serves a limited geographic area. A group of central offices is then  
16 connected (subtends) to a tandem switch. Ameritech has <sup>at least six</sup> ~~five~~ tandem switches in  
17 MSA 1. Focal Exhibit 1.3 is a map which depicts Ameritech's rate centers in  
18 MSA 1. The areas identified in the various colors identify Focal's understanding  
19 of the rate centers subtending a specific Ameritech tandem switch.

20  
21 17. Q. PLEASE SUMMARIZE WHAT IS SHOWN ON FOCAL EXHIBIT 1.3.

22 A. Ameritech declined to provide Focal with a response to its request for a list of rate  
23 centers subtending each tandem switch, so Focal assembled its own list from

1 available sources. Focal Exhibit 1.3 shows that Ameritech uses at least <sup>six</sup>~~five~~  
2 tandem switches to serve the Illinois portion of MSA 1. These tandem switches  
3 are referred to as the Wabash, Stewart, Newcastle, La Grange and Northbrook  
4 tandems. In general, the Wabash tandem serves part of downtown Chicago,  
5 O'Hare and the far southwest and north lakefront portions of the city. The  
6 Stewart tandem serves a major portion of downtown Chicago and the south side  
7 of Chicago. The Newcastle tandem serves the northwest portion of Chicago and  
8 the North Shore suburbs. The La Grange tandem serves the south and southwest  
9 portions of MSA 1. The Northbrook tandem serves the northwest portions of  
10 MSA 1.  
11

12 18. Q. WHY DOES AMERITECH USE SO MANY SWITCHES?

13 A. Perhaps surprisingly, the answer to this question is not simply that Ameritech  
14 needs more offices and switches than Focal because it has more customers in  
15 more locations, although that is at least part of the equation.

16  
17 The answer has more to do with the fact that Ameritech's local exchange network  
18 in the Chicago area is a legacy of its 100 years of service in the area and the  
19 different technologies that were available to it during various phases of that  
20 history. For example, the location of most of its central offices, or wire centers,  
21 was a function of the electrical properties of its copper loop plant. For both  
22 technical and economic reasons related to copper plant, central offices and the  
23 switches that were installed in them were constructed every few miles.

1  
2 While the physical limitations of the copper loop plant imposed numerous  
3 constraints to the construction of Ameritech's local phone network, so too did  
4 switching technology. Early electromechanical switches had capacity limits, as  
5 well as limits as to how many phone numbers they could address. Accordingly,  
6 Ameritech typically placed one or more of these switches in each central office,  
7 and usually assigned an entire NPA-NXX (i.e. a block of 10,000 numbers) to  
8 each. Switches were built with the intention of routing calls on the basis of these  
9 NPA-NXXs.  
10

11 19. Q. WHY IS IT UNNECESSARY FOR FOCAL TO UTILIZE AS MANY  
12 SWITCHES TO PROVIDE SERVICE?

13 A. Today's technology removes many of the technical and economic constraints that  
14 faced Ameritech in its early days. Fiber optic transmission, for example, removes  
15 many of the physical constraints associated with copper loops, and allows central  
16 offices to be built further from the physical location of the customer. Today's  
17 digital switches, in addition to providing many vertical features unavailable in the  
18 early switches, are capable of performing many more functions. They can serve  
19 tens of thousands of telephone lines, storing hundreds of thousands of numbers.  
20

21 These changes in technology and economics have driven the design of Focal's  
22 network. As noted above, Focal currently employs two switches to cover a large  
23 geographic area in the Chicago MSA -- an area which Ameritech serves using

1 several tandem switches and over 100 end office switches. Focal reaches out into  
2 the Chicago MSA by leasing fiber optic transmission capacity, both to connect to  
3 its customers and to interconnect with Ameritech's network for the purpose of  
4 exchanging traffic. Focal leases this transport, primarily from providers such as  
5 TCG and MFS, but also from Ameritech in some cases.

6  
7 If Ameritech were constructing its network from scratch today, it would certainly  
8 avail itself of the benefits of today's technology. This would likely manifest itself  
9 in constructing far fewer central offices that would be spread much further apart  
10 and connected via fiber optic transmission facilities. It would also likely deploy  
11 fewer, larger digital central office switches, and serve wider areas with each of  
12 them. In fact, Ameritech has actually consolidated a few central offices utilizing  
13 digital remote switching technology and connecting these remotes via fiber optic  
14 facilities to large digital host switches. This shows that Ameritech recognizes that  
15 the efficient network architecture has changed over time.

16  
17 20. Q. PLEASE BRIEFLY DESCRIBE FOCAL'S NETWORK ARCHITECTURE.

18 A. Although for billing purposes Focal mirrors Ameritech's rate centers, unlike  
19 Ameritech, Focal's modern network architecture does not require the placement  
20 of end offices and end office switches throughout MSA 1. Instead, all of Focal's  
21 customers are connected directly to a Focal switch which performs both end-  
22 office and tandem functions. Accordingly, the best way to apply the FCC's  
23 "geographic comparability test" is to compare the rate centers which are served by

1 any single Ameritech tandem (as shown in Focal Exhibit 1.3) to the rate centers  
2 served by a Focal switch.

3  
4 21. Q. HAS FOCAL PREPARED A GEOGRAPHIC COMPARABILITY ANALYSIS?

5 A. Yes, Focal Exhibit 1.4 and 1.5 are maps depicting the Ameritech rate centers  
6 served by Focal's Chicago and Arlington Heights switches, respectively. It is  
7 readily apparent by a comparison of these maps with Focal Exhibit 1.3 that both  
8 Focal switches each serve an area which is actually larger than that served by an  
9 Ameritech tandem switch.

10  
11 22. Q. PLEASE SUMMARIZE WHAT IS SHOWN BY A COMPARISON OF FOCAL  
12 EXHIBITS 1.4 AND 1.5 WITH THE AMERITECH TANDEM SERVING  
13 AREAS SHOWN IN FOCAL EXHIBIT 1.3.

14 A. Focal's Arlington Heights and Chicago switches each serve a very large  
15 geographic area in MSA 1. Each switch serves parts of the city of Chicago as well  
16 as large areas in the suburban and rural portions of MSA 1. It is my  
17 understanding that Focal must show that its switch serves an area comparable to  
18 the area served by *an* Ameritech tandem, not a combination of them. Nevertheless  
19 it is quite evident, for example, that Focal's switches each serve an area larger  
20 than that served by Ameritech's Wabash, Stewart, and Newcastle tandems both  
21 individually and *combined*.

22

1 23. Q. WHILE PREPARING THE GEOGRAPHIC COMPARABILITY ANALYSIS,  
2 WHAT MEANING WAS ATTACHED TO THE FCC'S PHRASE, "SERVES A  
3 GEOGRAPHIC AREA"?

4 A. Focal Exhibits 1.4 and 1.5 use an extremely conservative definition of "serves a  
5 geographic area." A particular rate center has been deemed to be "served" by a  
6 Focal switch, and is shown shaded on the map, only if Focal has customers and  
7 customer circuits physically located in the rate center.  
8

9 24. Q. WHY DO YOU CONSIDER FOCAL'S METHODOLOGY TO BE  
10 CONSERVATIVE?

11 A. Focal's methodology excludes a rate center if the only customer in the rate center  
12 subscribes to a foreign exchange service and has a telephone number associated  
13 with a particular rate center, but is not necessarily physically located in the rate  
14 center. In such a circumstance, that rate center has not been counted as a rate  
15 center "served" by a Focal switch for the purpose of conducting the geographic  
16 comparability test. I should emphasize that this is an artificial construct intended  
17 merely to show how readily Focal satisfies the applicable standard to qualify for  
18 the tandem rate. From a more conventional telephone industry perspective,  
19 Focal's switches are fully capable of serving and do serve the entire geographic  
20 area of MSA 1.  
21

22 25. Q. IS FOCAL CAPABLE OF SERVING THE RATE CENTERS WHICH ARE  
23 NOT SHADED ON FOCAL EXHIBITS 1.4 AND 1.5?

1

2

A. Yes, Focal's network, including its switches, is fully capable of serving all rate centers in MSA 1. It simply takes time for a competitive local exchange carrier ("CLEC") like Focal to attract customers ubiquitously throughout a territory, which explains why not all rate centers are shaded on Exhibits 1.4 and 1.5.

3

4

5

6

7

26. Q. HAVE YOU PREPARED ANY OTHER ANALYSIS TO DEMONSTRATE THAT FOCAL SATISFIES THE GEOGRAPHIC COMPARABILITY TEST?

8

9

A. Yes, Focal Exhibit 1.6 is another representation of the data shown on the earlier exhibits. It is a list of the Ameritech rate centers in MSA 1 which are served by the Chicago and Arlington Heights switches. Focal Exhibit 1.6 again makes it apparent that the Focal switches serve areas which Ameritech serves through multiple tandem switches.

10

11

12

13

14

15

27. Q. WHY ARE SOME RATE CENTERS LISTED UNDER BOTH THE CHICAGO AND ARLINGTON HEIGHTS SWITCHES?

16

17

A. Focal does not limit the serving area of its switches to specific geographic areas in MSA 1. Focal may install facilities from both the Chicago switch and the Arlington Heights switch to customers in the same rate center. Indeed, an individual customer may be served by both switches.

18

19

20

21

22

28. Q. YOU'VE DEMONSTRATED THAT FOCAL'S CUSTOMER BASE IS WIDELY DISPERSED GEOGRAPHICALLY. WHY IS THAT RELEVANT

23

1 TO THE ISSUE OF THE APPROPRIATE RATE FOR INTERCARRIER  
2 COMPENSATION?

3 A. The wide geographic dispersion of Focal's customer base demonstrates that  
4 Focal's switches are, without question, currently and actually serving an area  
5 comparable to that served by an Ameritech tandem switch. In the TCG  
6 Arbitration, the Commission authorized TCG to charge the tandem rate even  
7 though TCG did not then serve customers throughout MSA 1, and over  
8 Ameritech's objection that TCG's switch merely had the "potential" to serve  
9 customers in an area comparable to that served by an Ameritech tandem. The  
10 Commission was satisfied that TCG had the capability to serve customers  
11 throughout MSA 1. This warranted the conclusion that the tandem rate should be  
12 used.

13  
14 29. Q. WHAT WAS AMERITECH'S POSITION IN THE TCG ARBITRATION  
15 REGARDING THIS ISSUE?

16 A. As stated by the Commission:

17 [Ameritech maintained that] the "area served by the incumbent  
18 LEC's tandem switch" is the sum of the areas served by the end  
19 offices subtending the tandem. The area served by an end office,  
20 in turn, "is a defined exchange where the customers are physically  
21 linked into a switch node that serves that territory." . . . A  
22 requesting carrier's switch serves the area served by the incumbent  
23 LEC's tandem if and only if the requesting carrier is collocated in  
24 each of the end offices subtending the tandem, or builds fiber to  
25 customers in each of the end offices subtending the tandem.  
26 Conversely, if the requesting carrier's switch does not serve an  
27 area served by an end office subtending the incumbent LEC's  
28 tandem, it does not serve the area. Teleport Communications

1                    Group: Petition for Arbitration, 1996 ILL. PUC LEXIS 616, \*12,  
2                    Docket 96-AB-001 (Nov. 4, 1996).  
3

4    30.    Q.    WAS AMERITECH'S POSITION ADOPTED BY THE COMMISSION?

5            A.    No, Ameritech's position was rejected by the Commission. However, it is notable  
6            that Focal would likely qualify for the tandem rate even using the position  
7            Ameritech unsuccessfully urged the Commission to adopt for TCG. As I noted  
8            above, unlike Ameritech, Focal's technologically advanced network does not  
9            require end offices and end office switches throughout MSA 1. All Focal  
10           customers are connected directly to one of the two Focal switches. Focal mirrors  
11           Ameritech's rate centers, so as the rejected Ameritech test would state it, the area  
12           served by Focal would be the exchange or rate center in which the customers are  
13           physically linked into a switch that serves that territory. The connection is not  
14           always a fiber connection, as stated in the Ameritech formulation, but the  
15           transmission medium should not be relevant to the analysis.

16  
17           Thus, applying the rejected Ameritech approach, Focal's switch would be deemed  
18           to serve every exchange in which it has a customer. All that remains under the  
19           rejected Ameritech approach is to compare the exchanges served by the Focal  
20           switch to the exchanges subtended by an Ameritech tandem switch. I have  
21           already shown in Focal Exhibits 1.4 and 1.5 that Focal serves exchanges or rate  
22           centers covering an area comparable to, if not greater than, that served by an  
23           Ameritech tandem switch. Therefore, Focal is entitled to the tandem rate even

1 under the standard which Ameritech proposed, and the Commission rejected, in  
2 the TCG Arbitration.

3  
4 31. Q. IS THE NUMBER OF CUSTOMERS SERVED IN EACH RATE CENTER OR  
5 THE VOLUME OF TRAFFIC TO A RATE CENTER RELEVANT WHEN  
6 APPLYING THE GEOGRAPHIC COMPARABILITY TEST?

7 A. No. I am aware that in other forums Ameritech has proposed that those measures  
8 be considered. However, those measures are irrelevant because they have nothing  
9 to do with the geographic scope of a switch's service area. Rather, they are  
10 measures of market penetration. In the TCG Arbitration, the Commission  
11 squarely rejected a similar Ameritech effort to impose a market penetration test.  
12 By definition, a new entrant could not possibly pass a market penetration test.  
13 Indeed, it is only because Focal has grown rapidly that it can show that it has  
14 customers physically located in so many Ameritech rate centers. If the same  
15 analysis as I used here were used a year ago, it is much less likely that Focal could  
16 have shown such a widely dispersed customer base.

17  
18 32. Q. SINCE FOCAL HAS DEMONSTRATED THAT IT SATISFIES THE  
19 GEOGRAPHIC COMPARABILITY TEST, DOES THAT END THE  
20 COMMISSION'S INQUIRY INTO THE PROPER RATE FOR  
21 INTERCARRIER COMPENSATION?

22 A. It is my understanding that the FCC's rule specifies that only the geographic  
23 comparability test must be met in order for a CLEC to be entitled to the tandem

1 rate. However, the FCC also discussed in the Local Competition Order what has  
2 been referred to as the "tandem functionality" test. This Commission also  
3 considered the "tandem functionality" test in the TCG Arbitration. I will  
4 demonstrate that if that test were applied to Focal, Focal would be fully entitled to  
5 charge the tandem rate for intercarrier compensation.  
6

7 33. Q. PLEASE DESCRIBE FOCAL'S TWO SWITCHES.

8 A. Both the downtown Chicago switch and the Arlington Heights switch are Nortel  
9 DMS-500 switches. The DMS-500 switch combines the capabilities of what  
10 Ameritech would provide through separate end office and tandem switches. It is  
11 an advanced technology switch whose software load includes a comprehensive set  
12 of features by combining the local and tandem services of the DMS-100 and 250  
13 switch. In addition to the trunk connections supported by the DMS-250, the  
14 DMS-500 delivers all line types currently <sup>supported</sup> ~~support~~ by the DMS 100 system for  
15 residential and business applications. Focal uses Nortel's ~~general-release~~ generic  
16 software release 10 in the Chicago switch, and release 11 in the Arlington Heights  
17 switch. Both switches will be brought up to release 12 in February 2000.  
18

19 34. Q. PLEASE DESCRIBE SOME OF THE DMS-500'S NETWORK  
20 APPLICATIONS.

21 A. Because the DMS-500 system is designed for maximum switching versatility, it  
22 can deliver a wide range of telecommunications services tailored to the unique

1 needs of any network or subscriber market. For example, the DMS-500 switch  
2 serves as a Class 4/5 switch using the following typical connections:

- 3 -- Subscriber line connections through remote switching platforms to  
4 provide custom calling and CLASS features to residential  
5 subscribers;
- 6  
7 -- Subscriber line connections through S/DMS AccessNodes (or  
8 other DMS remote access vehicles) to provide Centrex-based  
9 advanced voice and data services to a variety of businesses or  
10 business locations;
- 11  
12 -- Trunk connections to a LEC central office to provide billing and  
13 operator based services; and
- 14  
15 -- Trunk connections to an IXC to provide traffic aggregation for  
16 long distance voice transport together with CCS7-based signaling  
17 trunks for Intelligent Network applications.  
18

19 35. Q. PLEASE DESCRIBE THE LINE CONNECTIONS TO AND LINE  
20 INTERFACES ON THE DMS-500.

21 A. Line connections to the DMS-500 switch include all line types currently  
22 supported by the DMS-100 system for residential and business applications, from  
23 Plain Old Telephone Service ("POTS") analog lines to ISDN BRI digital lines.

24  
25 Line interfaces on the DMS-500 switch comply with LATA Switching System  
26 Generic Requirements ("LSSGR") and other published Bellcore Technical  
27 References ("TRs") for Class 5 end offices and Class 4/5 tandem offices  
28 delivering line services in the local loop.  
29

1 36. Q. PLEASE BRIEFLY DESCRIBE THE TRUNK CONNECTIONS TO AND  
2 TRUNK INTERFACES ON THE DMS-500.

3 A. Trunk connections to the DMS-500 switch include a full complement of trunk  
4 types necessary for interswitch, interoffice, and interexchange communications,  
5 such as:

- 6 - Feature Group A, B, C and D;
- 7 - Intermachine Trunk;
- 8 - ISDN PRI, and;
- 9 - Equal Access to Carrier.

10 Trunk interfaces on the DMS-500 system comply with Bellcore and American  
11 National Standards Institute ("ANSI") requirements.

12  
13 37. Q. DO FOCAL'S SWITCHES PROVIDE TANDEM FUNCTIONALITIES IN THE  
14 MANNER DESCRIBED IN THE FCC'S DISCUSSION IN THE LOCAL  
15 COMPETITION ORDER?

16 A. As the foregoing description of the DMS-500 switch indicates, Focal's switches  
17 do indeed perform both end office and tandem switch functions. Traditionally,  
18 tandem switches (which were commonly referred to as Class 4 switches in the  
19 pre-divestiture AT&T hierarchy) generally aggregated traffic from a number of  
20 central office switches (Class 5 switches) for purposes of passing that traffic to  
21 other tandem offices for termination elsewhere on the network. The tandem  
22 switch is also traditionally used for aggregation and processing of operator  
23 services traffic, routing traffic that is to be transferred between the trunk groups of

1 two separate carriers, and measuring and recording traffic detail for billing.  
2 While ILECs have traditionally employed two separate switches to accomplish  
3 these Class 4 (tandem) and Class 5 (end office) functions; as I've shown above,  
4 Focal's Nortel DMS-500 switches perform all of these functions and a number of  
5 others within the same switch.  
6

7 38. Q. WHAT DO YOU CONSIDER THE CORE TANDEM FUNCTION?

8 A. The core tandem function is the aggregation of traffic between customers calling  
9 outside their immediate exchange. For example, on the Ameritech network a  
10 large number of end offices serve a relatively small area. Rather than connect  
11 every end office to every other end office, traffic is sent to tandem switches which  
12 serve groups of end offices. Thus, a call from an Ameritech customer to someone  
13 in another rate center often must travel to a tandem switch which has a connection  
14 to another tandem switch which, in turn connects to the end office switch serving  
15 the called customer. In the Ameritech network architecture, the tandem switches  
16 aggregate traffic to be sent to other tandem switches.  
17

18 As a consequence of Focal's network design, Focal's switches perform a great  
19 deal of traffic aggregation, and therefore perform the core tandem function,  
20 among the others I have described.  
21

1 39. Q. PLEASE ELABORATE ON YOUR STATEMENT THAT FOCAL'S  
2 NETWORK ARCHITECTURE REQUIRES A GREAT DEAL OF TRAFFIC  
3 AGGREGATION.

4 A. Focal is currently connected to <sup>at least six</sup> ~~five~~ Ameritech tandems in Illinois and two  
5 tandems in northern Indiana. However, Focal typically requests that Ameritech  
6 establish separate direct end office routes to bring traffic to Focal. Focal is  
7 currently connected to approximately 160 Ameritech end offices. This means that  
8 the vast majority of traffic from Ameritech delivered to Focal is disaggregated,  
9 largely separated into separate trunk groups by the end office where the call was  
10 originated, delivered to the POI and ultimately terminated onto separate trunk  
11 ports on the "trunk side" or "network side" of Focal's switch. Focal's switch then  
12 performs the aggregation function from the multiple end offices and other trunk  
13 groups onto facilities for the delivery of the traffic to the Focal customer. I should  
14 note that while this traffic may traverse an Ameritech tandem office where the  
15 POI may be located, it usually does not traverse an Ameritech tandem switch and  
16 therefore Ameritech does not perform the aggregation of this traffic. In other  
17 words, for the vast majority of traffic, it is Focal's switch that performs the traffic  
18 aggregation function, not Ameritech's tandem switch.

19  
20 40. Q. WHY DOES FOCAL UTILIZE SUCH AN ARCHITECTURE?

21 A. Because Focal connects to both end-offices and tandems we provide a diverse and  
22 virtually non-blocking network to deliver calls. For example, Focal uses multiple  
23 network providers for interconnections to end offices and tandems. Focal